

WHAT IS CLAIMED IS:

1. A scanning optical apparatus in which an image writing light flux that is modulated by an image signal, emitted from light source means is
5 deflected by deflecting means to scan a surface to be scanned via imaging means, comprising:

ghost exposure amount calculation means for calculating a position on the surface to be scanned at which ghost light from a component of the scanning
10 optical apparatus disposed in an optical path through which a light flux emitted from said light source means passes appears and an exposure amount thereof, based on precedently stored relationship of the position at which ghost light appears and the
15 exposure amount thereof to the light flux emitted from said light source and on said image signal;

exposure amount control means for controlling an emitted light amount of the light flux emitted from said light source means or a pulse width of the
20 light flux emitted from said light source means based on a result of said calculation.

2. A scanning optical apparatus according to claim 1, wherein said ghost light includes light that
25 is generated by internal surface reflection of a scanning optical element included in said imaging means and arrives at said surface to be scanned.

3. A scanning optical apparatus according to claim 1, wherein said ghost light includes light that is reflected from a surface of a scanning optical element included in said imaging means and incident
5 on said deflecting means again and arrives at said surface to be scanned.

4. A scanning optical apparatus according to claim 1, wherein said ghost light includes light that
10 comes from a surface of a chassis supporting scanning optical elements included in said deflecting means and said imaging means and arrives at said surface to be scanned.

15 5. A scanning optical apparatus according to claim 1, wherein said precedently stored relationship of the position at which ghost light appears and the exposure amount to the light flux emitted from said light source is related to a main scanning direction.

20

6. A scanning optical apparatus according to claim 1, wherein said precedently stored relationship of the position at which ghost light appears and the exposure amount to the light flux emitted from said
25 light source is related to a main scanning direction and a sub scanning direction.

7. A scanning optical apparatus according to claim 1, wherein a scanning optical element included in said imaging means comprises a plastic lens.

5 8. A scanning optical apparatus according to claim 1, wherein said light source means comprises a multi-beam light source that emits a plurality of light fluxes that are modulated independently.

10 9. A scanning optical apparatus in which a plurality of image writing light fluxes that are modulated by different image signals, emitted from plurality of light source means are deflected by deflecting means to opposite directions to scan a
15 plurality of surfaces to be scanned via plurality of imaging means, comprising:

ghost exposure amount calculation means for calculating a position on the surface to be scanned at which ghost light from a component of the scanning
20 optical apparatus disposed in an optical path through which a light flux emitted from said light source means passes appears and an exposure amount thereof, based on precedently stored relationship of the position at which ghost light appears and the
25 exposure amount thereof to the light flux emitted from said light source and on said image signal;

exposure amount control means for controlling

an emitted light amount of the light flux emitted from said light source means or a pulse width of the light flux emitted from said light source means based on a result of said calculation.

5

10. A scanning optical apparatus according to claim 9, wherein said ghost light includes light that is generated by internal surface reflection of a scanning optical element included in said imaging means and arrives at said surface to be scanned.

11. A scanning optical apparatus according to claim 9, wherein said ghost light includes light that is reflected from a surface of a scanning optical element included in said imaging means and incident on said deflecting means again and arrives at said surface to be scanned.

12. A scanning optical apparatus according to claim 9, wherein said ghost light includes light that comes from a surface of a chassis supporting scanning optical elements included in said deflecting means and said imaging means and arrives at said surface to be scanned.

25

13. A scanning optical apparatus according to claim 9, wherein said precedently stored relationship

of the position at which ghost light appears and the exposure amount to the light flux emitted from said light source is related to a main scanning direction.

5 14. A scanning optical apparatus according to claim 9, wherein said precedently stored relation of the position at which ghost light appears and the exposure amount to the light flux emitted from said light source is related to a main scanning direction
10 and a sub scanning direction.

 15. A scanning optical system according to claim 9, wherein a scanning optical element included in said imaging means comprises a plastic lens.
15

 16. A scanning optical apparatus according to claim 9, wherein said light source means comprises a multi-beam light source that emits a plurality of light fluxes that are modulated independently.
20

 17. A scanning optical apparatus according to claim 9, wherein said ghost light includes light reflected from a surface of a scanning optical element included in said imaging means and arriving
25 at an opposite surface to be scanned.

 18. An image forming apparatus comprising:

a scanning optical apparatus according to any one of claims 1 to 17;

a photosensitive member disposed at said surface to be scanned;

5 a developing device for developing an electrostatic latent image formed on said photosensitive member by a light flux scanned by said scanning optical apparatus as a toner image;

a transferring device for transferring said
10 developed toner image onto a transfer destination material; and

a fixing device for fixing the transferred toner image on the transfer destination material.

15 19. A color image forming apparatus comprising:

a scanning optical apparatus according to any one of claims 9 to 17;

a plurality of photosensitive members disposed at said plurality of surfaces to be scanned;

20 a plurality of developing devices for developing electrostatic latent images formed on said photosensitive members by light fluxes scanned by said scanning optical apparatus as toner images;

a transferring device for transferring said
25 developed toner images onto a transfer destination material; and

a fixing device for fixing the transferred

toner image on the transfer destination material.

20. An image forming apparatus comprising:
a scanning optical apparatus according to any
5 one of claims 1 to 17; and

a printer controller that converts code data
input from an external device into an image signal
and input it to said scanning optical system.

10 21. A color image forming apparatus comprising:
a scanning optical apparatus according to any
one of claims 9 to 17; and

a printer controller that converts code data
input from an external device into an image signal
15 and input it to said scanning optical system.